

What is SWAN ?

Sustainable Water Action Network



GOAL → *Build Research Links Between the EU and US*

- EU 7th Framework Programme
- Duration 4 years (2012-2016)

NEW GOAL → *A Trans-Atlantic Dialogue on Water*

- Trans-Atlantic & Trans-Disciplinary
- Socio-Ecological Ecosystem Security (Humans & Nature)

SWAN-1 Major Goals

- ① Enhance Scientific Cooperation between USA & Europe
- ② Promote Multi-Disciplinary and Multi-Regional collaboration regarding “Water” Sustainability
- ③ Combine Physical & Social Sciences with Governance
- ④ Develop Foundation for ongoing Collaboration

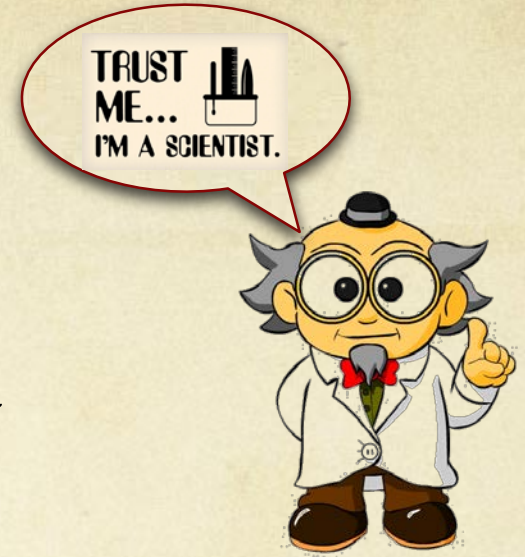
Origins



Arose out of conversation between *UofA* and *UMI* scientists
→ successes and failures of the 10-year
“*SAHRA*” Science & Technology Center project funded by NSF

In *SAHRA* ... the “Physical” Scientists drove the Science Agenda

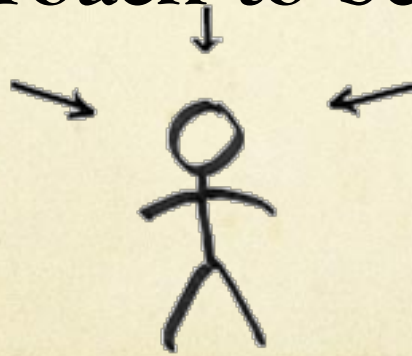
“*Believing*” they understood the
problems that needed solving



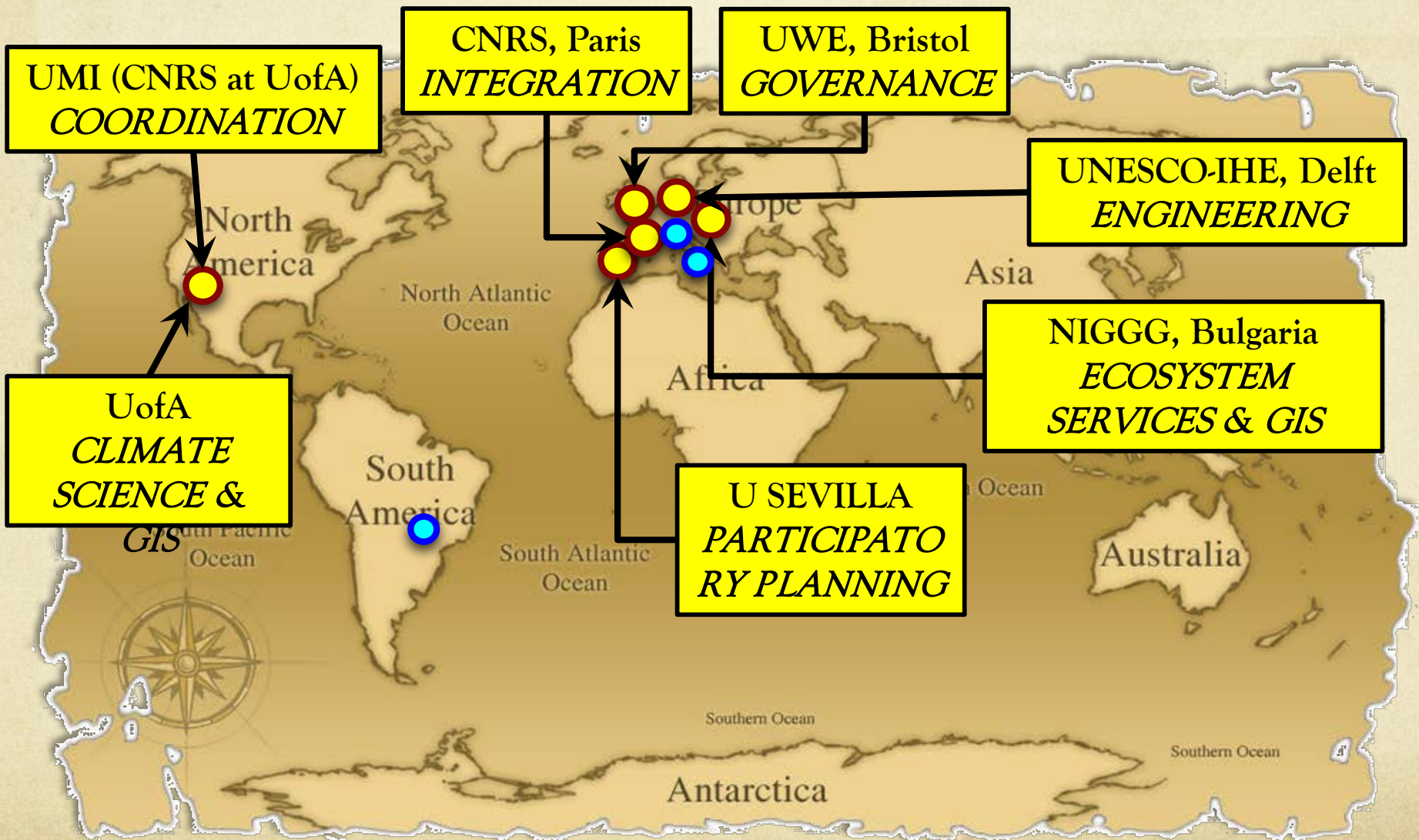
*SWAN-EU proposal based on
Social-Scientists driving the
Agenda*

&

“HUMAN-CENTERED
Approach to Science



Initial Main Participants



Major Theme

Integrating Hydrological and other Sciences into Urban-Plus Decision Making

We use the term “Urban-Plus” or “Urban+” to encompass urban areas and their entire supporting hydrological system.



Transdisciplinary Science

Characterized by
very high 'stakes'

*High
Complexity*

*Large
Uncertainty*

*Multiple Relevant
Perspectives*

Role of Science in Decision Making

'Normal Science'

Possible to handle challenges in a rigorous and rational way leading to 'optimal' solutions

Problem Structure Largely Understood

'Transdisciplinary Science'

Non-equivalent perceptions result in legitimate contrasting perspectives and large uncertainty

Problem Structure can be Under Question

Indications given by models and data are always mediated by political negotiation & common sense ...
The issue is how to handle this mediation

Search For Best Action



Foster Social Learning

SWAN-2 Goals

Trans-Atlantic Dialogue on Water

Trans-Atlantic & Trans-Disciplinary

Socio-Ecological “Ecosystem Security” (Humans & Nature)

Science

Ecosystem Services, Complexity
& Uncertainty as core concepts

Applications

Place-based Case
Studies

Education

Students, Research
Scientists & Faculty

Collaboration

Across disciplines /
continents / science &
practice

Communication

Cross-Discipline, Cross-
Continent, & Cross-
Culture

Coordination

Relationships between
science, knowledge &
decision-making

A “Systems” Approach

SWAN-2 TDW

Important Aspects

*Student & Faculty
Exchange*

*Citizen
Science*

*Network of
Institutions*

*Curriculum
Development*

*Social-Env
Justice*

*Dissolve
Disciplinary
Boundaries*

Place-based Case Studies

*Open Data &
Knowledge
Paradigm*

*Comparative Analysis of
Institutional
Frameworks*

Antarctica

The Challenge *Working Together*

